



CLAIMS

What is claimed is:

1. A vessel mooring and fluid transfer system for use with liquid cargo transport vessels, said system comprising:
 - an extended length space frame having a first end and a second end;
 - said rigid extended length space frame being supported on said first end by a
 - 5 first column and on said second end by a buoyancy system;
 - said first column being secured to the seabed;
 - said buoyancy system being supported by a substantially flat tank;
 - means for mooring said vessel to said first end of said rigid extended length
 - space frame;
 - 10 means for changing the azimuth of said rigid extended length space frame at said
 - second end of said rigid extended length space frame;
 - means for moving fluid to/from said vessel located at said second end of said
 - rigid extended length space frame.

2. The system as defined in Claim 1 wherein said means for changing the azimuth of said rigid extended length space frame are thrusters.

3. A vessel mooring and fluid transfer system for use with offshore vessels, said system comprising:

a rigid extended length space frame having a first end and a second end;

said rigid extended length space frame being supported on said first end by a

5 first column and on said second end by a second column;

said first column being secured to the seabed;

said second column being constructed and arranged to rest on said seabed;

means for mooring said vessel to said first end of said rigid extended length space frame;

10 means for changing the azimuth of said rigid extended length space frame at said second end of said rigid extended length space frame;

means for moving fluid to/from said vessel located at said second end of said rigid extended length space frame.

4. The system as defined in Claim 3 wherein said means for changing the azimuth of said rigid extended length space frame includes thrusters.

5. A method for mooring and off-loading fluids from a vessel at an offshore location, said method comprising the steps of:
- supporting the first end of an extended length space frame at an offshore location, so that the second end of said extended length space frame moves around said first
 - 5 end of said extended length space frame;
 - using thrusters located on said second end of said space frame to angularly position said space frame with respect to its first end;
 - mooring the vessel to the first end of said extended length space frame;
 - providing a fluid connection to the vessel at said second end of said extended
 - 10 length space frame; and
 - pumping fluid from the vessel through said fluid connection.